

day; 1200 mg/day with add-in-medication) and pregabalin (PG; 300 mg/day and 600 mg/day; 300 mg/day with add-in-medication) for the treatment of post-herpetic neuralgia (PHN) from the perspective of the German Sickness Funds. **METHODS:** The costs and benefits of gabapentin, PG and the lidocaine plaster were calculated using a Markov model taking a six-month time horizon. Transition probabilities were mainly based on clinical trials identified through a systematic review. Missing data, data on resource utilization and add-in/switch medication were obtained from a Delphi panel. Cost data were taken from official price lists. A modified TWIST (time without symptoms) analysis was conducted to calculate the cost per additional month with sufficient pain relief and no intolerable side-effects. **RESULTS:** Treatment with the lidocaine plaster costs a total of €937 per patient, compared with €728 for generic gabapentin, €875 for PG300 mg and dominated PG600 mg. Patients treated with the lidocaine plaster spent an average of 4.06 months (67.7% of the total treatment period) with adequate pain relief and no intolerable side-effects, compared with 2.72 months (45.3% of the total treatment period) for gabapentin, 3.02 months (50.3% of the total treatment period) for PG300 mg and 3.22 months (53.7% of the total treatment period) for PG600 mg. Lidocaine plaster therefore costs €156 per additional month with sufficient pain relief and no side-effects relative to gabapentin, €60 relative to PG300 mg. The lidocaine plaster was dominant over PG600 mg. Scenario analyses and extensive one-way sensitivity analyses on all parameters including the time horizon confirmed the robustness of the results. **CONCLUSIONS:** Patients receiving the lidocaine 5% plaster for PHN spend more time with sufficient pain relief and no intolerable side-effects than those treated with gabapentin or pregabalin.

PND14

#### **COST-EFFECTIVENESS OF PREGABALIN ADD-ON MEDICATION IN PATIENTS WITH REFRACTORY PARTIAL EPILEPSY IN FINLAND**

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**OBJECTIVES:** To assess the cost-effectiveness of pregabalin (PGB) and other add-on antiepileptic medicines over standard therapy (ST) in patients with refractory partial epilepsy (RPE) from the societal perspective in Finland. **METHODS:** A dynamic simulation model was used to estimate outcomes and costs of a hypothetical cohort of 1000 RPE patients over 1 year. Pregabalin (PGB 300 mg/d) was compared to clinically and commercially competitors: gabapentin (GBP 1800 mg/d), lamotrigine (LTG 300 mg/d), levetiracetam (LEV 2000 mg/d) and topiramate (TOP 200 mg/d). Number of seizure-free days (SFD) was used as an outcome measure. Local costs of RPE medicines (excluding VAT) and a specialist visit per a medicine switch were employed. Costs per a SFD were calculated. To account for uncertainty around the model estimates, the model was run for 50 samples. One-way sensitivity analysis (PGB 600 mg/d, TOP 400 mg/d or employment of generic GBP price) was conducted. **RESULTS:** In comparison to ST, PGB (300 mg/d) yielded an average of additional 40 SFDs per a patient during a year. Incremental cost for PGB was 29€ per a SFD (95% CI 23–36€). Corresponding estimate for PGB (600 mg/d) was 44€ per a SFD whereas it varied 43–86€ among the comparators. At the dose of 600 mg/d, the PGB incremental cost per a SFD was similar to GBP, but still lower than among other comparators. **CONCLUSION:** Principal findings from the model suggest that PGB (300 mg/d) showed to be a cost-effective add-on treatment for RPE patients in Finland compared to ST. The incremental cost of PGB (300 mg/d) per a SFD was lower than those of GBP, LTG and LEV with their

typical doses. One-way sensitivity analyses indicated that the results were robust to plausible variations in the essential model parameters, namely daily dose of PGB and TOP and price of GBP.

PND15

#### **THE COST-UTILITY OF EXELON PATCH IN THE MANAGEMENT OF PATIENTS WITH MODERATE ALZHEIMER'S DISEASE IN THE UNITED KINGDOM**

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**OBJECTIVES:** To model the incremental cost-utility of Exelon Patch *versus* best supportive care (BSC) in the management of Alzheimer's disease (AD), from the perspective of the UK NHS. **METHODS:** The incremental costs and Quality Adjusted Life Years (QALYs) associated with Exelon Patch treatment *versus* BSC were calculated using an economic model. Changes in Mini Mental State Examination (MMSE) scores over a 5-year period were used as a measure of the progression of AD. The clinical pathway was populated based on the results of the pivotal IDEAL trial, with 12-month follow-up data from patients who received Exelon Patch ( $n = 383$ ) and 6-month follow-up data from patients who received placebo ( $n = 282$ ). The progression of the disease was modelled beyond the study period using published equations to predict the natural decline of MMSE in AD patients. Costing variables included drugs, clinical monitoring and institutionalisation. **RESULTS:** Exelon Patch was shown to provide an incremental 0.1045 QALYs at an additional cost of £1,363 per patient, giving a cost-utility of £13,042 per QALY gained. One-way sensitivity analysis suggested that the main determinants of cost-effectiveness were the probability of institutionalisation, the relationship between MMSE states and quality of life, and the health economic perspective adopted. When informal care costs were included in the analysis, Exelon Patch was calculated to cost £634 per QALY gained. **CONCLUSION:** Exelon Patch has a superior cost-effectiveness profile than many treatments currently funded by the NHS. Further research studies focusing on activities of daily living to demonstrate costs and benefits of treatment are warranted.

PND16

#### **OBJECTIVE COSTS AND PREVALENCE OF COMORBIDITIES DURING THE YEAR FOLLOWING DIAGNOSIS FOR PERSONS WITH AND WITHOUT INSOMNIA**

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**OBJECTIVES:** Evaluate the prevalence and costs of commonly reported insomnia comorbidities. **METHODS:** A database of US employees from 2001–2006 was used to identify subjects with insomnia (based on the International Classification of Diseases–9 [ICD-9] codes or prescription for a hypnotic agent) and control employees (3:1) (matched by demographics, job information, and geographic region). Direct medical costs (inflated to 2006 dollars) for each comorbid condition, based on ICD-9 codes from the Agency for Health Research and Quality 261 Specific Categories, were analyzed for the 12 months after insomnia

diagnosis. Prevalence comparisons were calculated using z-scores of log odds ratios (Woolf method), and the average cost (for the entire cohort) comparisons were calculated using Satterthwaite t-tests. **RESULTS:** A total of 12,308 employees with insomnia and 36,924 matched controls were analyzed. Results are presented for each comorbid condition as: (% insomnia prevalence: % control prevalence, insomnia costs: control costs). Mental Disorders: Dissociative/Personality Disorders (15.88%:3.32%, \$34:\$6); Affective Disorders (14.54%:2.92%, \$125:\$17); Substance-Related Mental Disorders (2.00%:0.80%, \$7:\$1); Alcohol-Related Mental Disorders (0.89%:0.22%, \$18:\$3); Other Mental Conditions (15.17%:4.27%, \$44:\$11); Other Psychoses (0.24%:0.05%, \$2:\$0). Respiratory System: Asthma (6.24%:3.04%, \$20:\$8); COPD and Bronchiectasis (4.14%:2.23%, \$10:\$5). Nervous System Sense Organs: Headache including Migraine (13.07%:5.16%, \$54:\$16); Dizziness/Vertigo (4.95%:2.35%, \$16:\$8); Hereditary/Degenerative Nervous System Condition (1.09%:0.22%, \$5:\$1); Other Nervous System Disorders (34.20%:5.01%, \$168:\$40). Injury/Poisoning: Sprains and Strains (13.40%:7.52%, \$69:\$31); Fracture-Lower Limb (1.58%:0.95%, \$26:\$8); Fracture-Upper Limb (1.26%:0.71%, \$15:\$7). Other Conditions: Rheumatoid Arthritis (1.31%:0.52%, \$19:\$7); Malaise and Fatigue (15.20%:5.81%, \$14:\$5); Syncope (1.59%:0.72%, \$14:\$5); Chronic Renal Failure (0.50%:0.13%, \$74:\$7); Breast Cancer (1.20%:0.67%, \$112:\$26). Overall, employees in the insomnia cohort had significantly higher prevalence (80.8%) and costs (47.5%) for the 261 conditions compared with the matched controls ( $p < 0.05$ ). **CONCLUSION:** Employees with insomnia have more prevalent comorbid conditions than subjects without insomnia. From an insurer's perspective, this increased burden for insomnia sufferers is also associated with higher costs.

## PND17

#### TREATMENT COSTS ASSOCIATED WITH RESTLESS LEGS SYNDROME IN ITALY

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**OBJECTIVES:** To analyse hospital outpatient treatment patterns and costs associated with Restless Legs Syndrome (RLS) in Italy before the non-ergot derived dopamine agonist pramipexole was approved in the treatment of RLS. RLS is a common, although largely under-diagnosed, neurological disorder producing negative effects on patients' quality of life. **METHODS:** A retrospective database analysis was conducted using the database of the Sleep Disorders Centre of San Raffaele Hospital in Milan. The database records each patient's sleep disorder, baseline characteristics, drug prescriptions and medical procedures. 2,000 patients included in the database were screened in order to identify patients affected by RLS symptoms and to calculate resource use associated with the treatment of RLS from January 2004 to March 2005. **RESULTS:** In total, 122 patients (6% of all patients in the database) were diagnosed with RLS symptoms and consequently included in the study: mean age was found to be 52 years and 68% were women. All patients received at least three different drug classes over the observation period. The most frequently prescribed treatments were: benzodiazepines (64%), antidepressants (23%) anticonvulsants (4%), NSAIDs (4%) and oxerutines (5%). The total average cost per patient per year was € 289.09, including drug costs (€ 242.79), diagnostic tests (€ 32.67) and physician visits (€ 13.63). **CONCLUSION:** This was the first effort to evaluate hospital outpatient treatment patterns and costs for RLS in Italy. The majority of the annual treatment costs

incurred by RLS patients were associated with currently unlicensed treatment options which can place an additional cost burden on the public health care system while treatment outcomes are limited.

## PND18

#### HEALTH AND NON-HEALTH RESOURCES UTILIZATION AND DERIVED COSTS OF TREATING UNDER ROUTINE MEDICAL PRACTICE REFRACTORY PAIN ASSOCIATED TO TRIGEMINAL NEURALGIA IN PRIMARY CARE SETTING (PCS): A 12-WEEKS LONGITUDINAL POST-HOC ANALYSIS

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**OBJECTIVES:** To analyze longitudinal health and non-health resources utilization (HRU) and derived costs of treating refractory pain due to Trigeminal Neuralgia in Primary Care Setting (PCS) during 12-weeks under routine medical practice. **METHODS:** Sub-analysis of patients above 18 years, with chronic pain (6-month or more) due to trigeminal neuralgia refractory to, at least, one previous analgesic [previous mean (SD) number of drugs was 2.2 (1.2), with a 36.3% on one-drug only], included in a prospective, naturalistic, 12-weeks two-visit study on refractory peripheral Neuropathic pain. Health resources included all-type medical visits, hospitalizations, complementary test and pharmacological and non-pharmacological therapies. Non-health included wages losses due to loss-work-days equivalents (LWDE = absenteeism days + days working with reduced productivity due to pain). Pain severity was measured by McGill-pain scale. Descriptive statistics and paired-t and non-parametric tests were applied. **RESULTS:** Ninety-one [62.2% women, 57.7 (13.9) years] patients were analyzed: 45% switched to pregabalin as a monotherapy, 37% received pregabalin as add-on therapy, and in 18% previous treatment was replaced by a regimen not including pregabalin. Significant reduction in last-week mean pain severity [-35.0 (23.9) mm,  $p < 0.0001$ ] was accompanied by reductions in quarterly mean LWDE of -23.7 (23.6) days,  $p < 0.0001$ , average total medical visits per trimester of -5.4 (7.6) visits,  $p < 0.0001$  and percentage of most subjects-prescribed complementary test. The extra costs of drugs, due to pregabalin [+€133.5 (115.2),  $p < 0.0001$ ], was off-set by higher significant reductions in all other components of health costs yielding to a greater total, direct and indirect costs reductions: €-1646.2 (1638.6), €-549.6 (1131.8) and €-1096.6 (1173.1), respectively ( $p < 0.0001$  in all cases). **CONCLUSION:** A therapy mix of painful trigeminal neuralgia mostly based on pregabalin (82% of cases) was associated with a significant longitudinal reduction in health resources utilization and total costs in the primary care setting under routine medical practice.

## PND19

#### ECONOMIC EVALUATION OF INTERFERON- $\beta$ IN THE TREATMENT OF PATIENTS WITH A CLINICALLY ISOLATED SYNDROME (CIS)

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**OBJECTIVES:** Multiple sclerosis (MS) is a chronic progressive irreversible neurological disease. Individuals often experience a